1. A control system for a food product slicer including a rotatable slicing knife and a food product carriage mounted for movement back and forth past the slicing knife, the control system comprising:

a motor having a rotating output;

a multi-link drive arrangement connected between the rotating output of the motor and the food product carriage for moving the carriage during motor operation, a pivot link of the multi-link drive arrangement having a stationary axis, the pivot link pivoting back and forth about the stationary axis during motor operation;

an encoder arrangement associated with the pivot link and including a mask element, a light source and a photo-detector, the mask element including a plurality window regions distributed thereon, the light source positioned for directing light at the window regions of the mask element sequentially during pivoting movement of the pivot link and the photo-detector positioned to receive light directed at the window regions by the light source, the photo-detector providing output signals responsive to receipt/non-receipt of light emitted by the light source; and

a controller receiving the photo-detector output signals and responsively tracking movement of the food product carriage.

2. The control system of claim 1 wherein a position of the mask element is fixed and both the light source and the photo-detector are operatively coupled for pivoting movement with the pivot link.

3. The control system of claim 1 wherein a position of the light source is fixed and a position of the photo-detector is fixed, and the mask element is operatively coupled for movement with the pivot link.

4. The control system of claim 1 wherein the multi-link drive arrangement comprises a four link arrangement.

5. The control system of claim 1 wherein a slicing operation is defined by repeated slicing strokes and return strokes of the food product carriage, each slicing stroke defined by movement of the food product carriage from a first position to a second position and each return stroke defined by movement of the food product carriage from the second position back to the first position, the controller operatively connected for controlling a speed

of motor rotation and thus a speed of food product carriage movement, and during the slicing operation the controller operates to effect motor rotation so as to move the food product carriage at a first average speed for slicing strokes and at a second average speed for return strokes, wherein the first average speed is less than the second average speed.

6. The control system of claim 5 wherein the controller operates to effect motor rotation so as to slow movement of the food product carriage as the food product carriage approaches the second position during each slicing stroke.

7. The control system of claim 1 wherein the pivot link pivots back and forth between a first position and a second position, the photo-detector, light source and mask element are arranged to provide alignment between the light source, one of the plurality of openings and the photo-detector when the pivot link is at the first position, the controller operable to detect a change in direction of movement of the food product carriage based upon an output signal of the photo-detector when the pivot link is in the first position.

8. The control system of claim 7, wherein the output signal of the photo-detector when the pivot link is in the first position includes at least one signal characteristic which identifies the first position.

9. The control system of claim 1 wherein the controller counts at least pulse signals output by the photo-detector in order to track movement of the food product carriage.

10. The control system of claim 9 wherein the controller counts both pulse signals and regions between the pulse signals in order to track movement of the food product carriage.

11. The control system of claim 9, further comprising a carriage sensor for detecting positioning of the food product carriage at at least one of a slicing stroke starting position of the food product carriage and a slicing stroke completed position of the food product carriage, an output of the carriage sensor provided to the controller and the controller responsively resetting its tracking operation when the food product carriage is sensed by the carriage sensor.

12. The control system of claim 1 wherein the window regions allow light to pass through the mask element and the light source is positioned on one side of the mask element and the photo-detector is positioned on an opposite side of the mask element.

13. The control system of claim 1 wherein the window regions reflect light and both the light source and the photo-detector are positioned on a similar side of the mask element.

14. The control system of claim 1 wherein the light source and the photo-detector are connected to a PC board.

15. The control system of claim 1 wherein the mask element is formed as a curved mask element.

16. The control system of claim 1 wherein the mask element is formed with one or more bends therein.

17. The control system of claim 1 wherein the controller receives an input from a combination start/pause switch and is operable to begin a slicing operation when the combination start/pause switch is triggered prior to slicing, and the controller is operable to pause a slicing operation when the combination start/pause switch is triggered during slicing.

18. A control system for a food product slicer including a rotatable slicing knife and a food product carriage mounted for movement back and forth past the slicing knife, the control system comprising:

a motor having a rotating output;

a multi-link drive arrangement connected between the rotating output of the motor and the food product carriage for moving the carriage during motor operation, a pivot link of the multi-link drive arrangement having a stationary axis, the pivot link pivoting back and forth about the stationary axis during motor operation;

an encoder arrangement including an arcuate mask element, a light source and a photo-detector, an axis of the arcuate mask element being substantially coincident with the stationary axis, the arcuate mask element including a plurality of openings thereon, the light source positioned to one side of the arcuate mask element and the photo-detector positioned to an opposite side of the arcuate mask element, the mask element operatively coupled for pivoting movement with the pivot link, the photo-detector outputting signals responsive to receipt/non-receipt of light emitted by the light source and passing through the openings in the arcuate mask element.

19. The control system of claim 18, further comprising:

a controller receiving the photo-detector signals and responsively tracking movement of the food product carriage.

20. The control system of claim 19 wherein a slicing operation is defined by repeated slicing strokes and return strokes of the food product carriage, each slicing stroke defined by movement of the food product carriage from a first position to a second position and each return stroke defined by movement of the food product carriage from the second position back to the first position, the controller operatively connected for controlling a speed of motor rotation and thus a speed of food product carriage movement, and during the slicing operation the controller operates to effect motor rotation so as to move the food product carriage at a first average speed for slicing strokes and at a second average speed for return strokes, where the first average speed is less than the second average speed.

21. The control system of claim 19 wherein the controller counts at least pulse signals output by the photo-detector in order to track movement of the food product carriage.

22. The control system of claim 21 wherein the controller counts both pulse signals and regions between the pulse signals in order to track movement of the food product carriage.

23. The control system of claim 22, further comprising a carriage sensor positioned for detecting one of a slicing stroke starting position of the carriage and a slicing stroke completed position of the carriage, an output of the carriage sensor provided to the controller and the controller responsively resetting its tracking operation when the food product carriage is sensed by the carriage sensor.

24. The control system of claim 18 wherein the multi-link drive arrangement comprises a four link arrangement.

25. The control system of claim 18 wherein the light source and the photo-detector are connected to a PC board.

26. A method for automatically controlling a food product slicing operation in which a food product carriage is repeatedly moved back and forth past a slicing knife, the slicing operation being defined by repeated slicing strokes and return strokes of the food product carriage, each slicing stroke defined by movement of the food product carriage from a first position to a second position and each return stroke defined by movement of the food product carriage from the second position back to the first position, the method comprising:

utilizing a motor and associated multi-link drive arrangement to effect movement of the food product carriage;

providing an encoder arrangement having at least one element connected for pivoting movement with a pivot link of the multi-link drive arrangement to produce output signals indicative of a pivoting movement of the pivot link about a stationary axis; and

based at least in part upon the output signals of the encoder arrangement, automatically controlling motor rotation so as to:

automatically move the food product carriage at a first average speed for slicing strokes;

automatically move the food product carriage at a second average speed for return strokes, the first average speed being slower than the second average speed.

27. The method of claim 25 including the further step of:

based at least in part upon the output signals of the encoder arrangement, slowing down motor rotation as the food product carriage approaches the second position during each slicing stroke.

28. The method of claim 26 including the further step of:

based at least in part upon the output signals of the encoder arrangement, slowing down motor rotation as the food product carriage approaches the first position during each return stroke.

29. A method of operating a slicer including a reciprocating carriage, the method comprising the steps of:

providing a single switch for starting an automatic slicing operation and pausing the automatic slicing operation;

responsive to triggering of the switch prior to slicing, initiating the automatic slicing operation; and

responsive to triggering of the switch during slicing, pausing the automatic slicing operation.

30. The method of claim 29 wherein the pausing step involves stopping the food product carriage at a predetermined position.